

PRINT OF DRAWINGS
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438
64

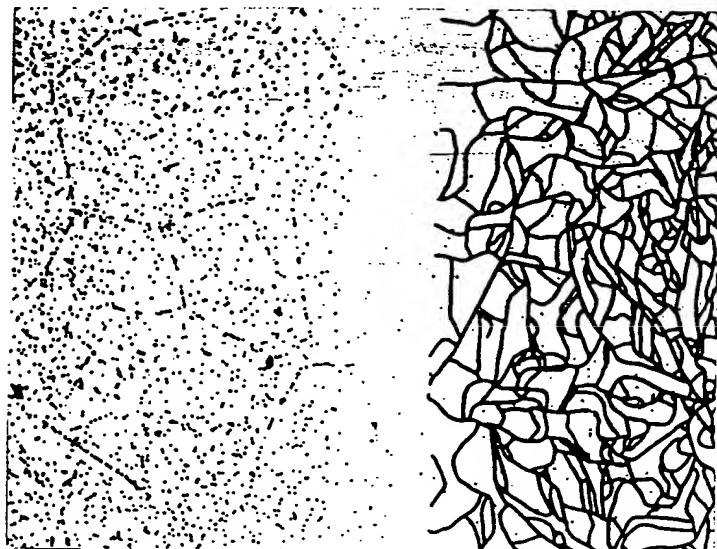


Fig.1A

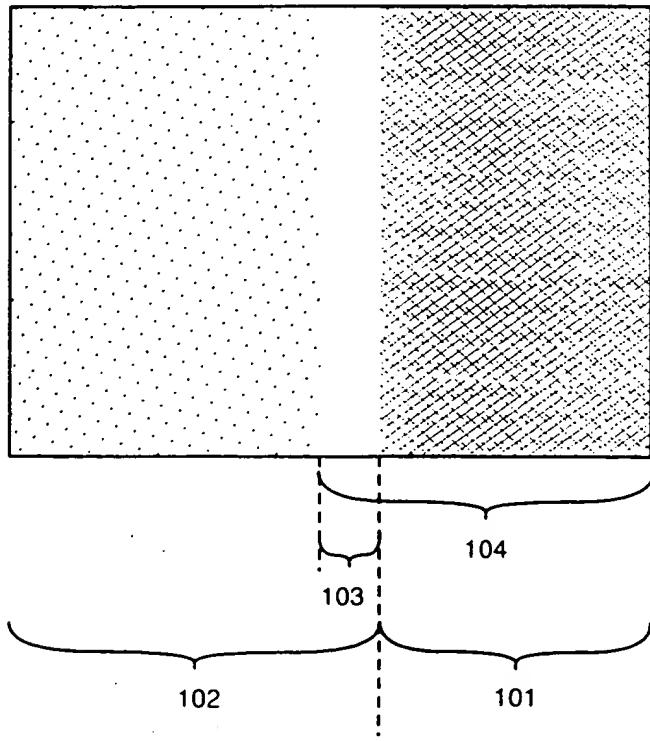


Fig.1B

Fig.2A

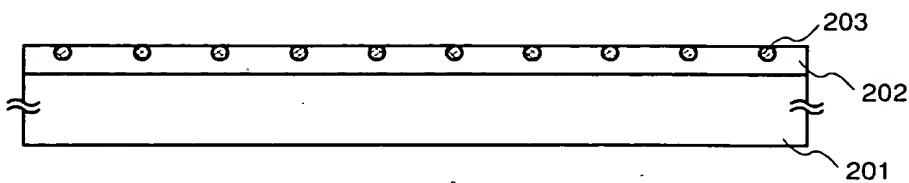


Fig.2B

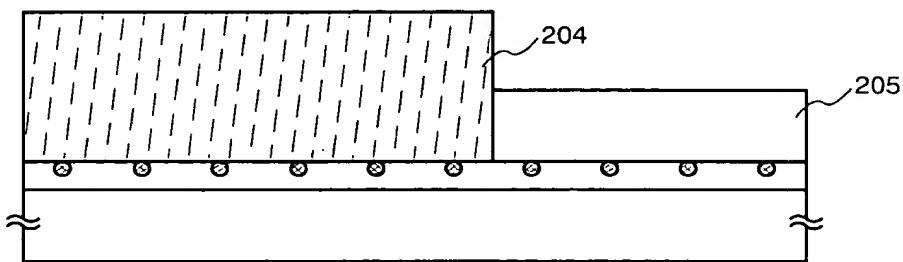


Fig.2C

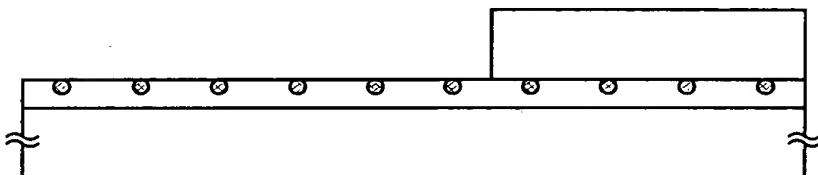


Fig.2D

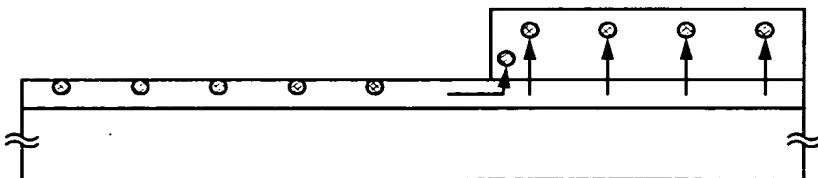
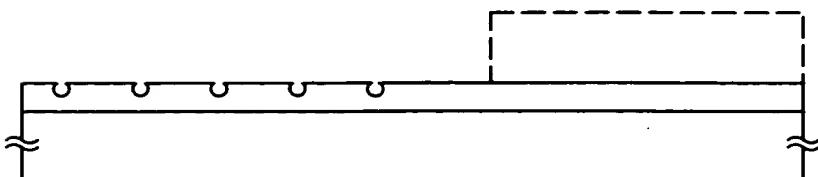


Fig.2E



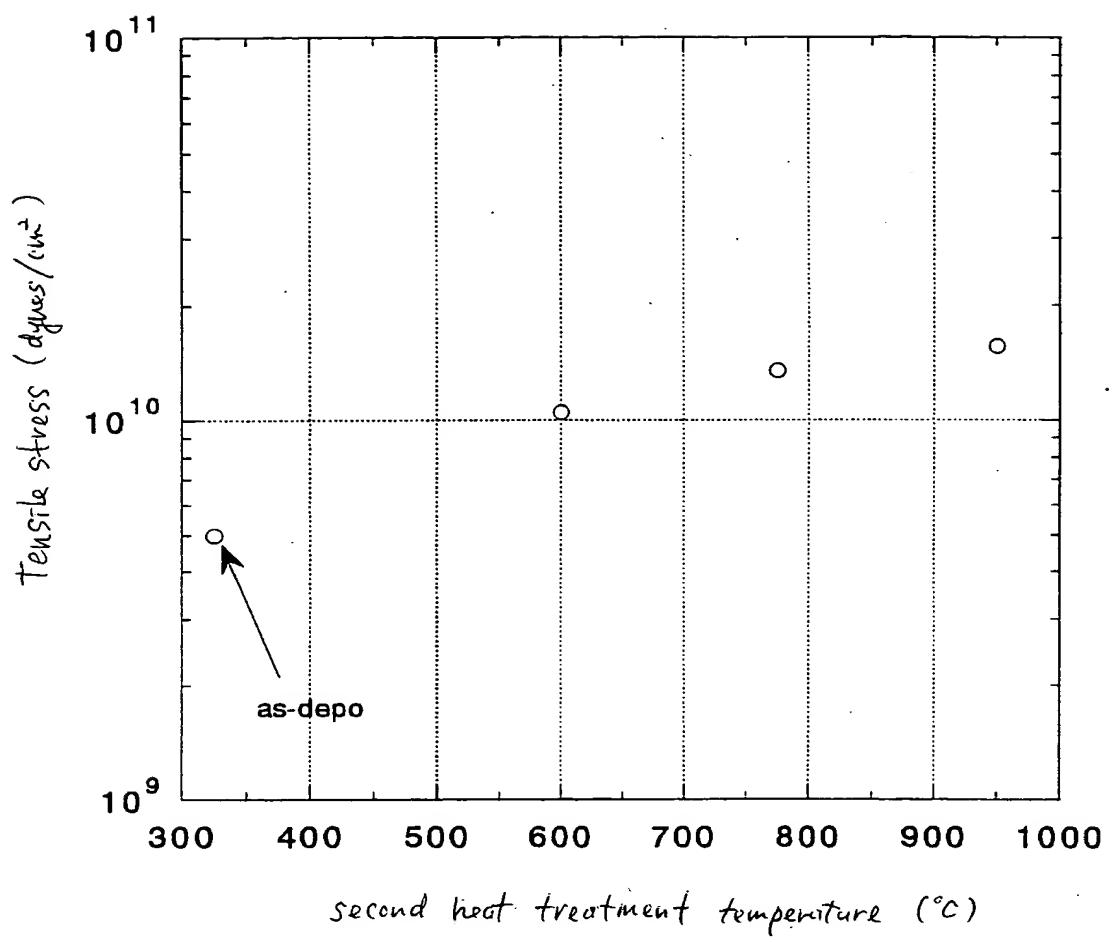


Fig. 3

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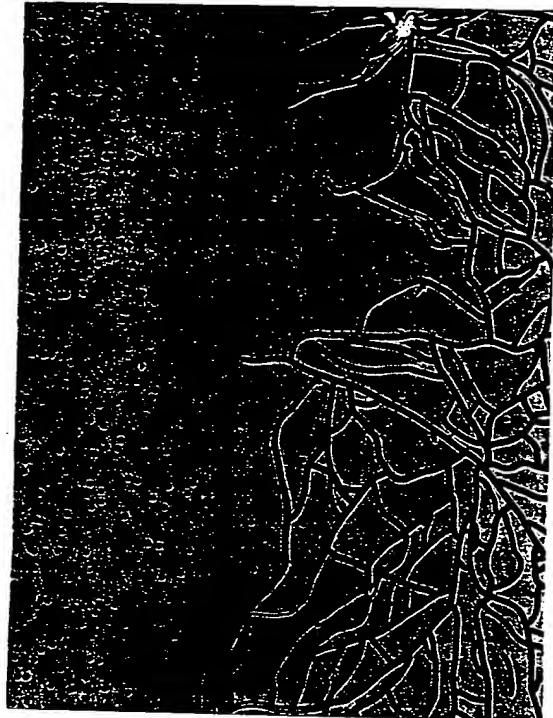


Fig.4

Fig.5A

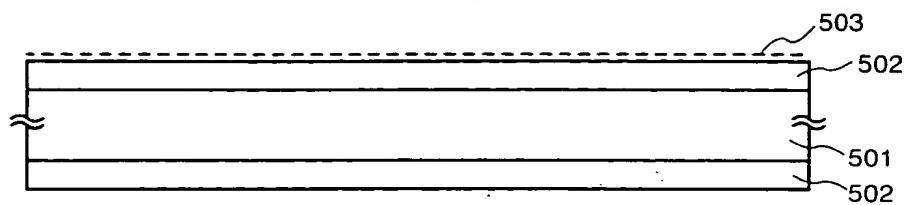


Fig.5B

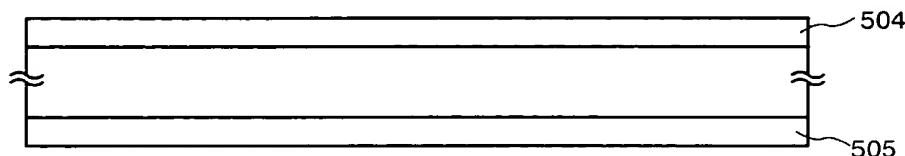


Fig.5C

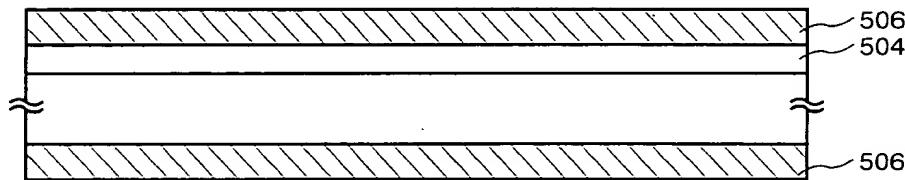


Fig.5D

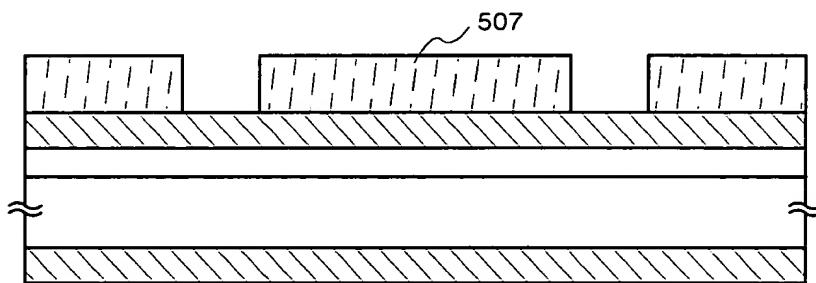


Fig.5E

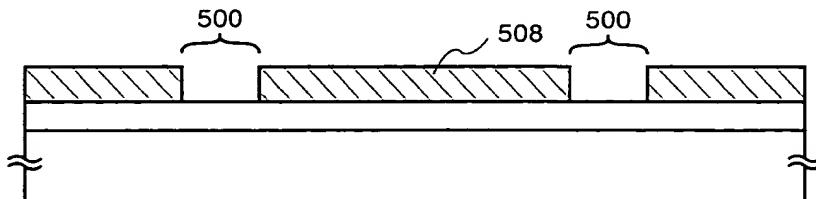


Fig.6A

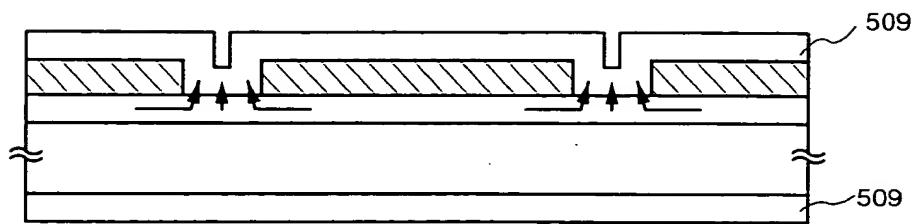


Fig.6B

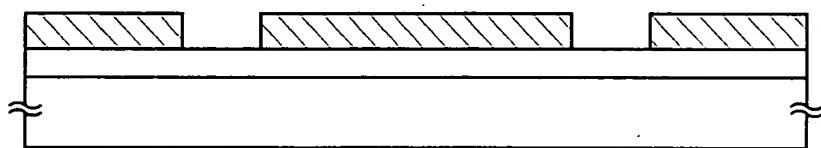


Fig.6C

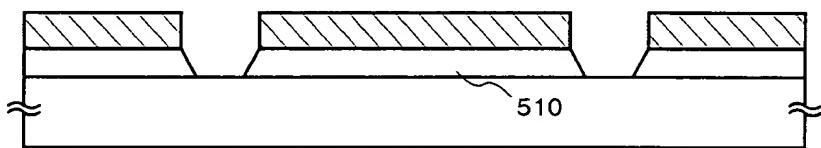


Fig.6D



Fig.7A

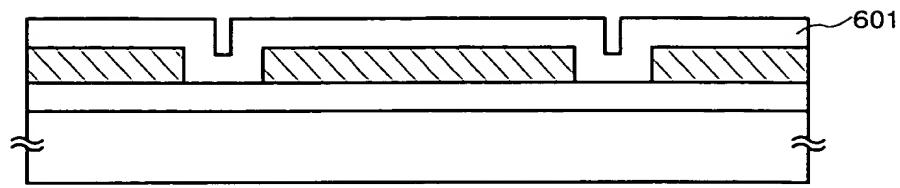


Fig.7B

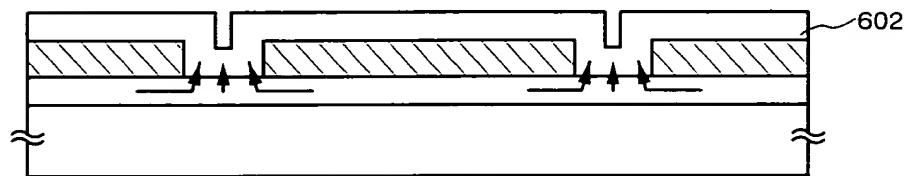


Fig.7C

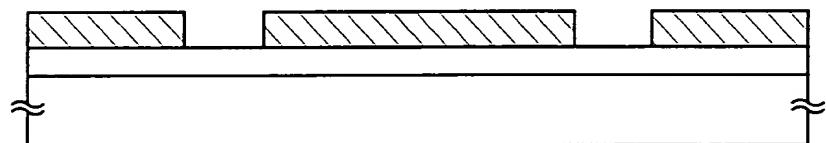


Fig.7D

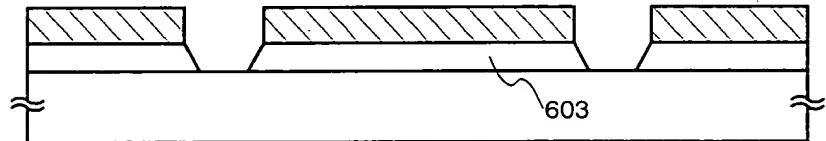


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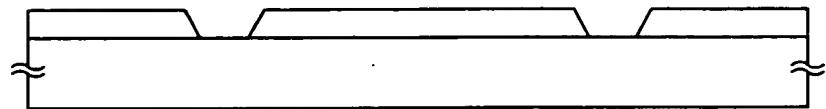


Fig.8A

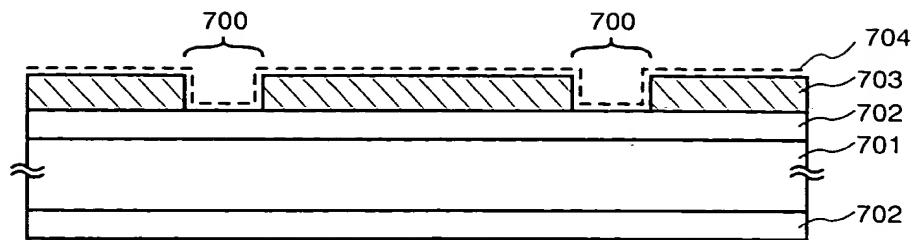


Fig.8B

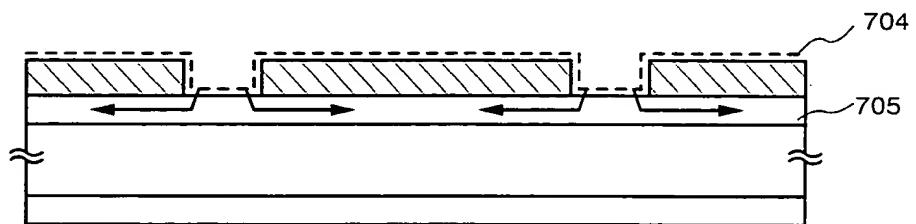


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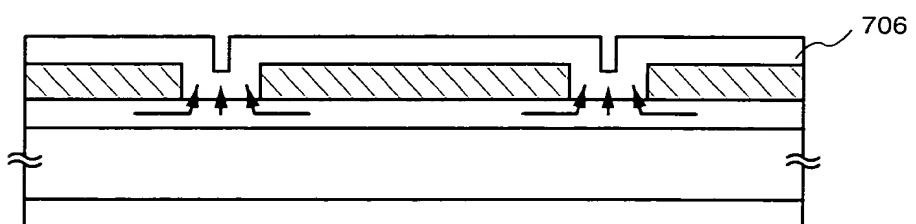


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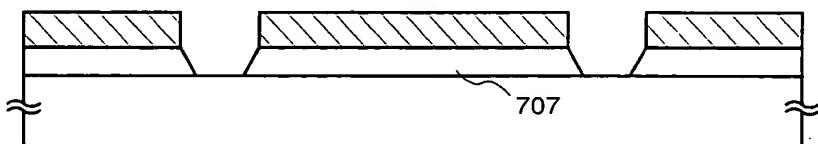
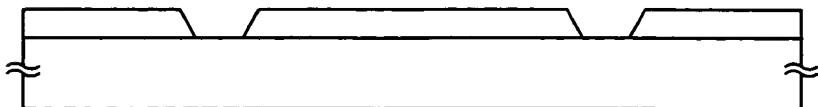


Fig.8E



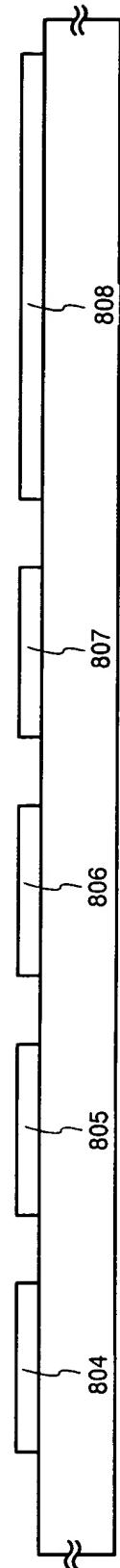


Fig.9A

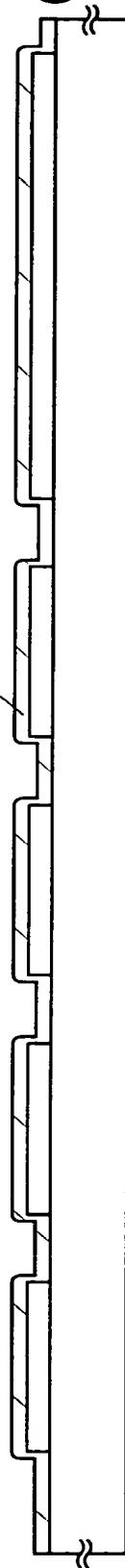


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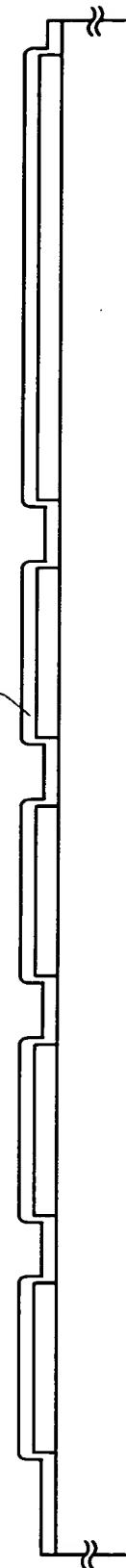


Fig.9C

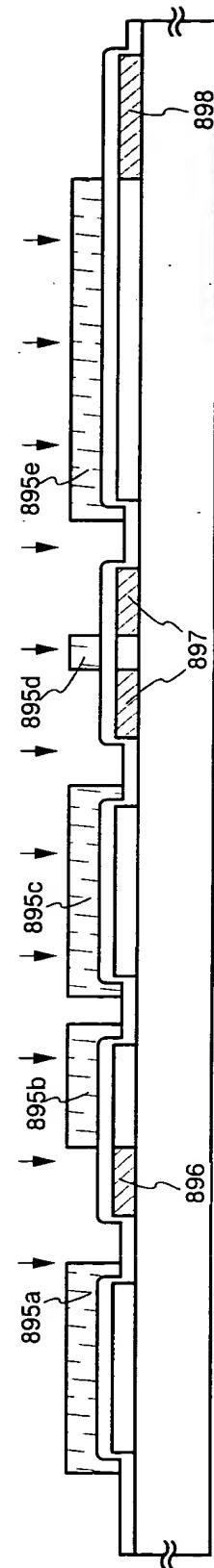


Fig.9D

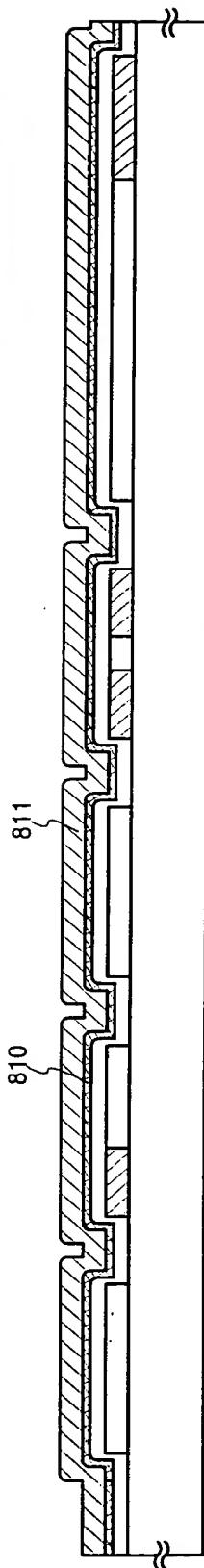


Fig.9E

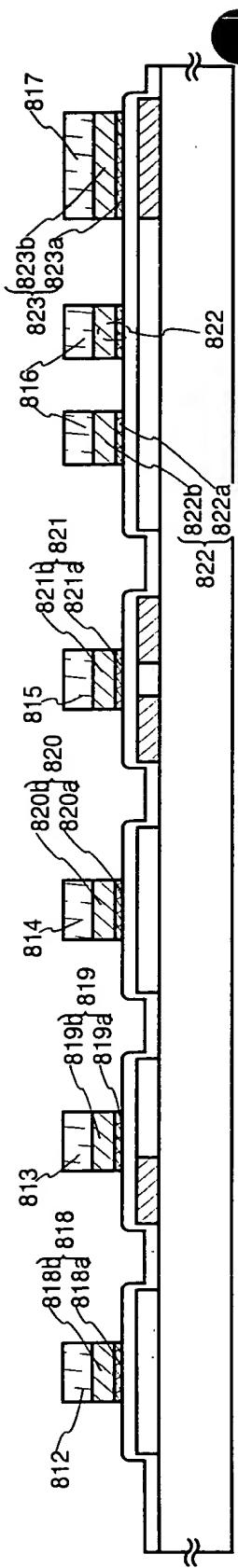


Fig. 10A

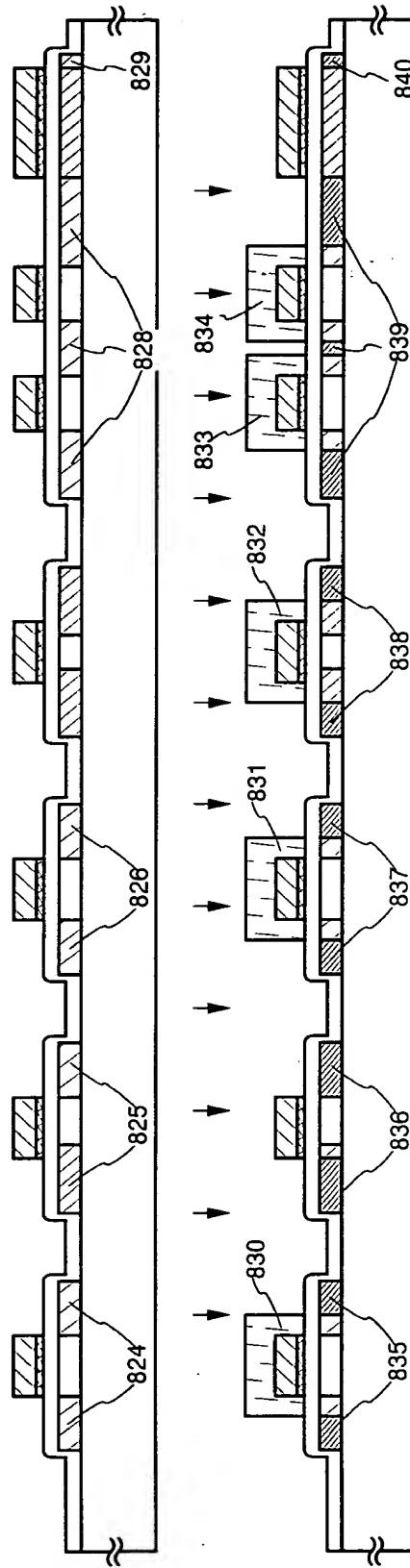


Fig. 10B

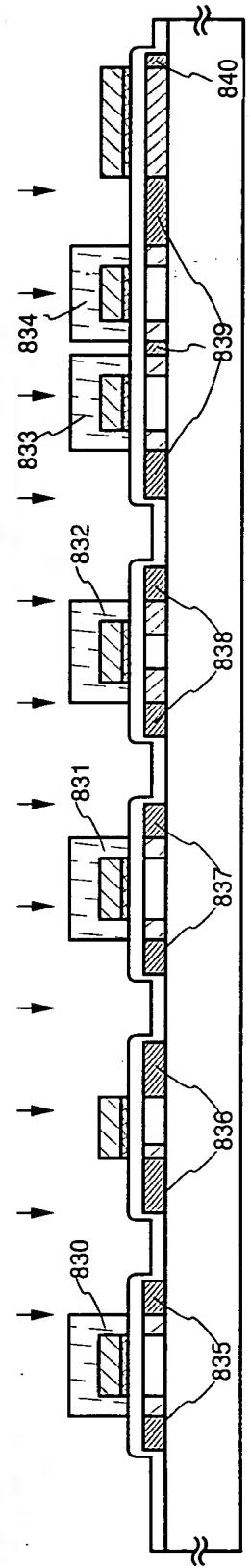


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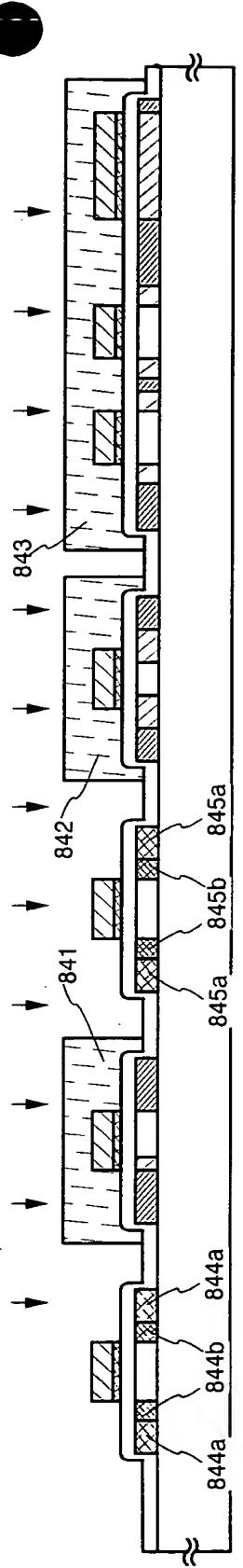


Fig. 10D

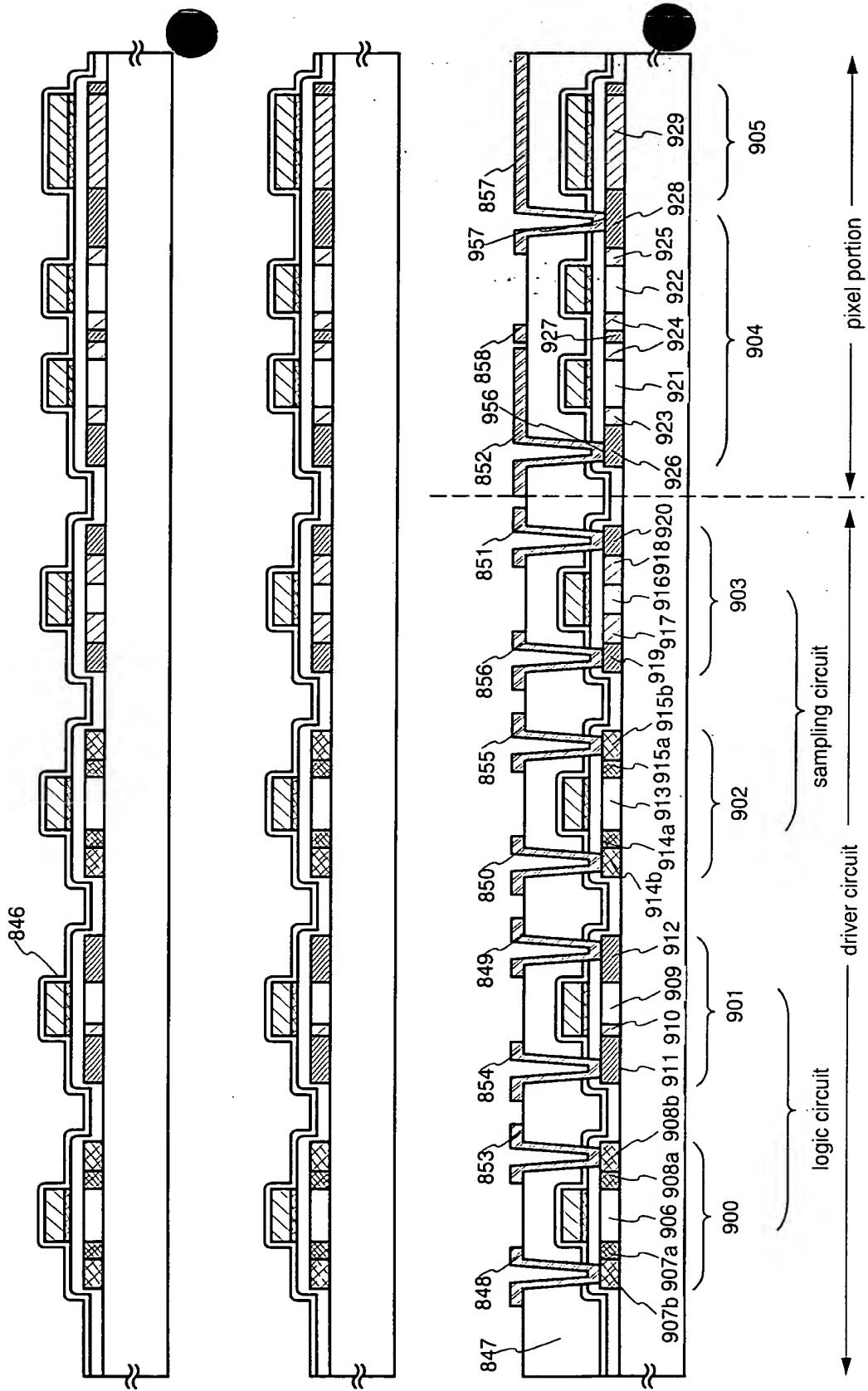


Fig. 11A

Fig. 11B

Fig. 11C

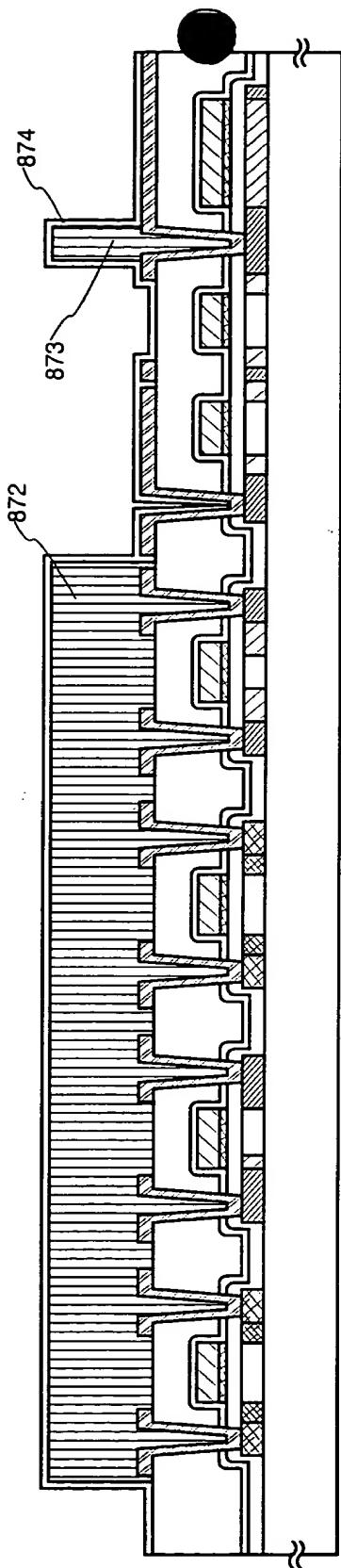


Fig. 12A

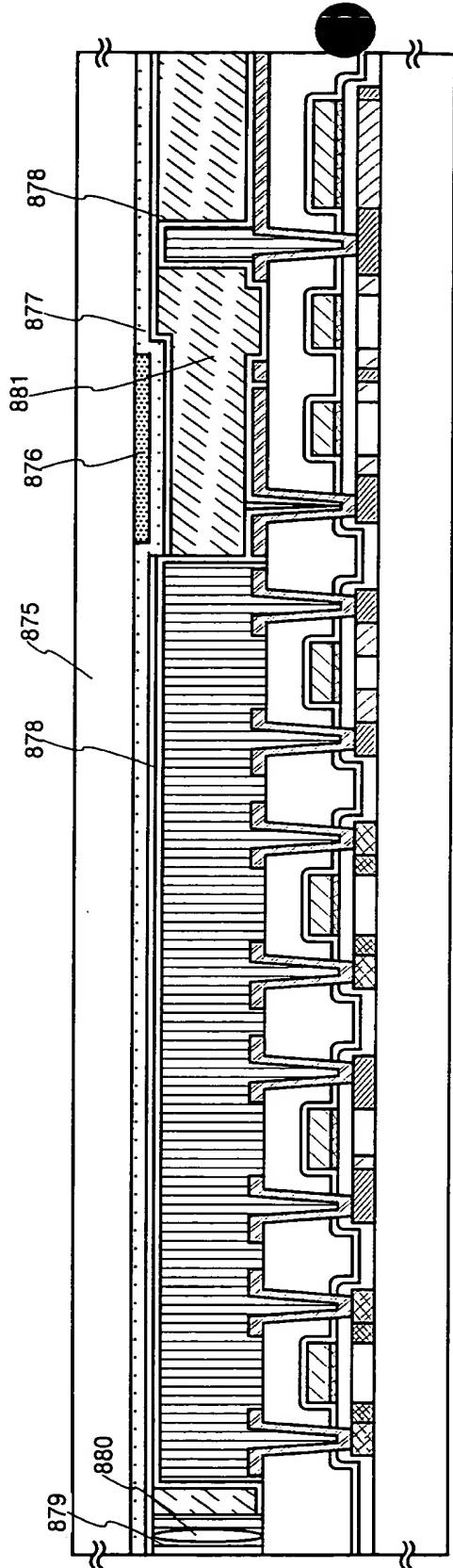


Fig. 12B

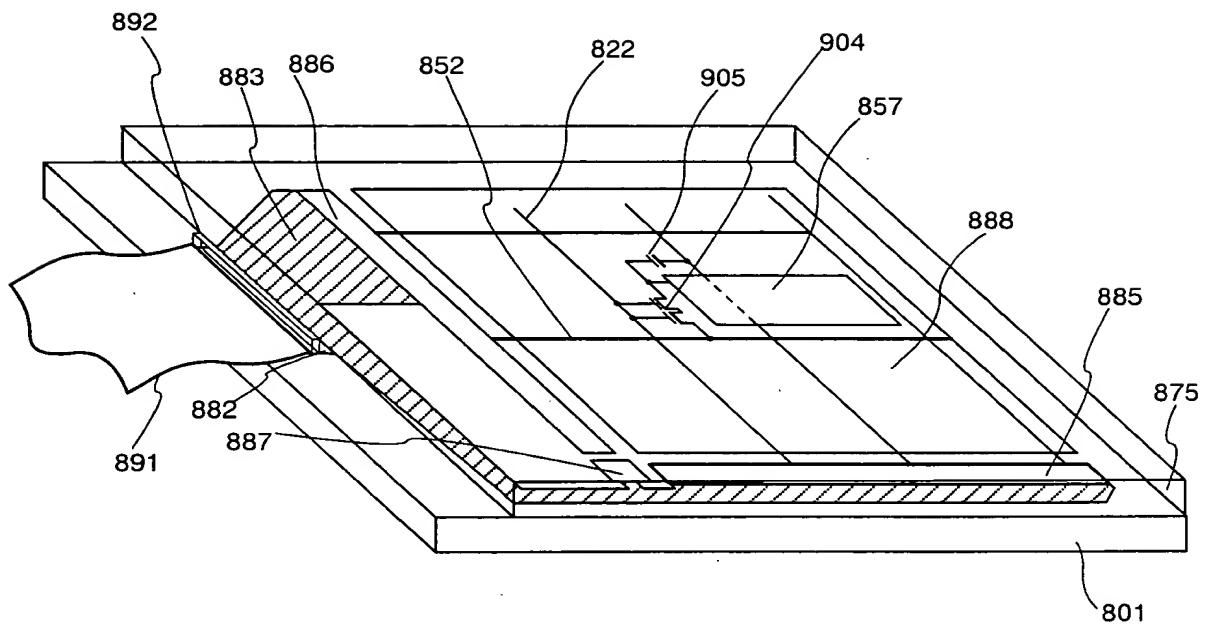


Fig.13

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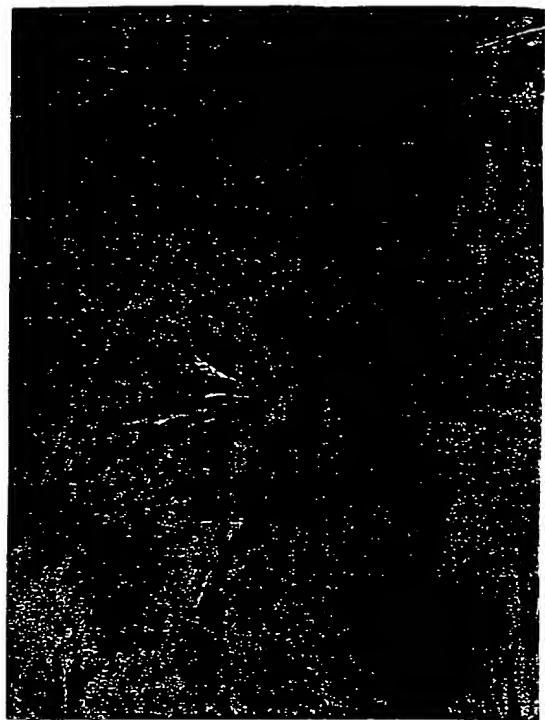


Fig.14

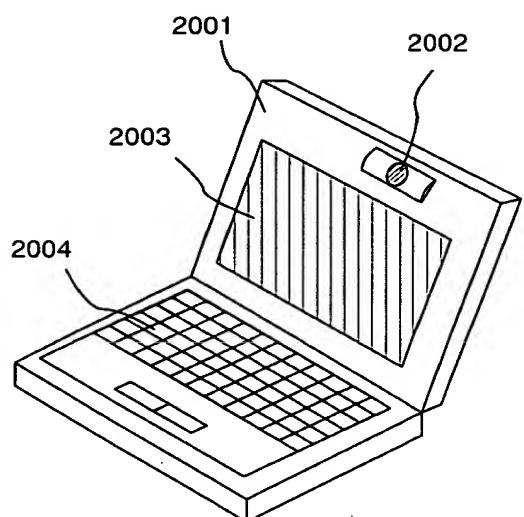


Fig. 15A

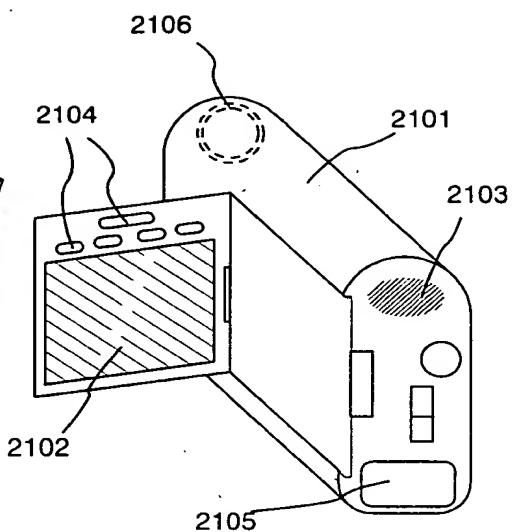


Fig. 15B

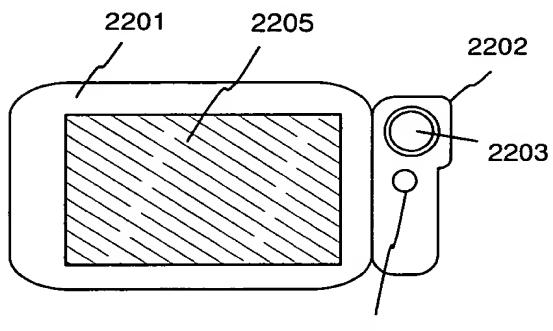


Fig. 15C

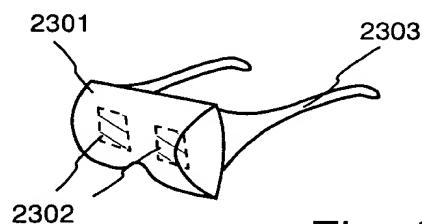


Fig. 15D

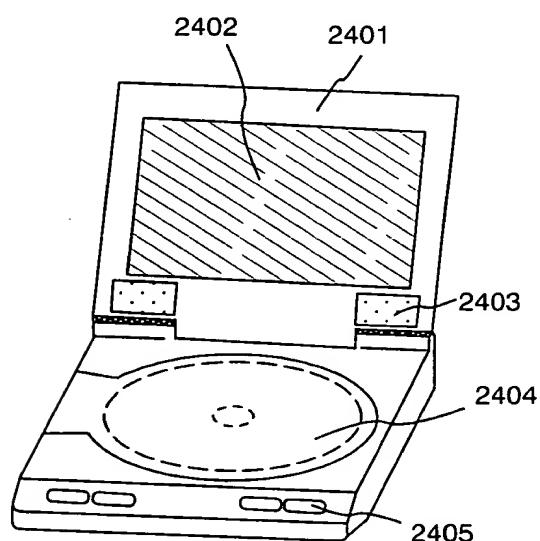


Fig. 15E

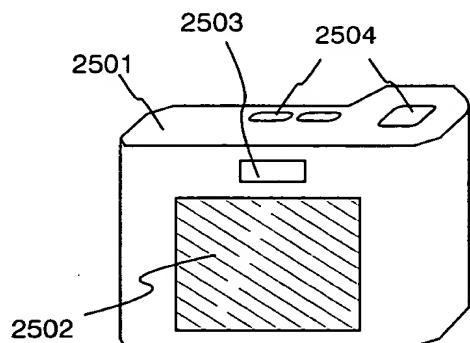


Fig. 15F

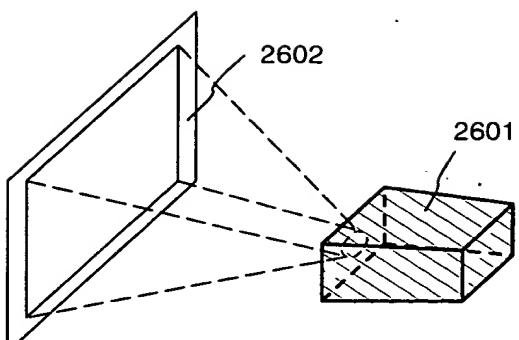


Fig. 16A

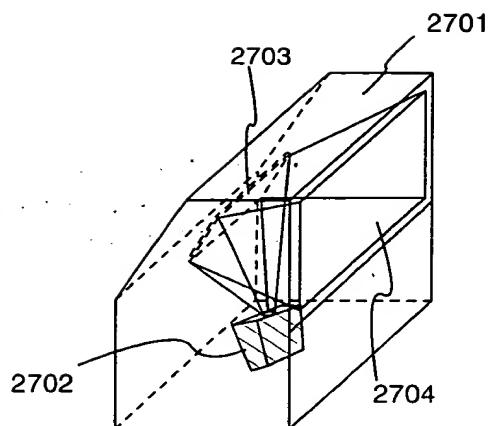


Fig. 16B

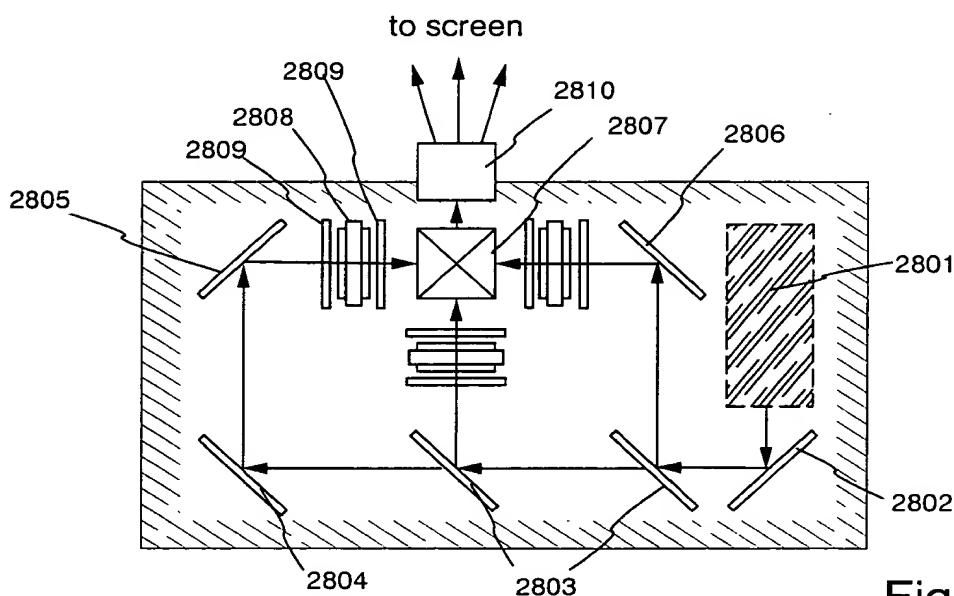


Fig. 16C

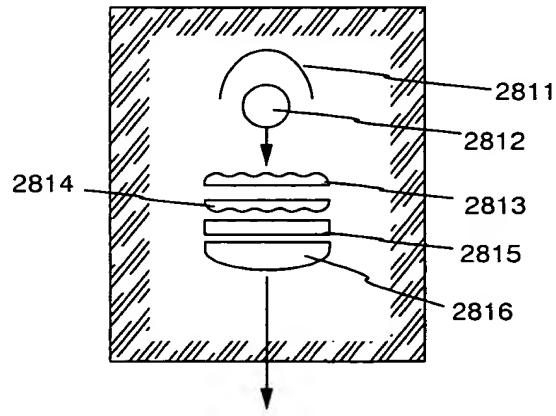


Fig. 16D

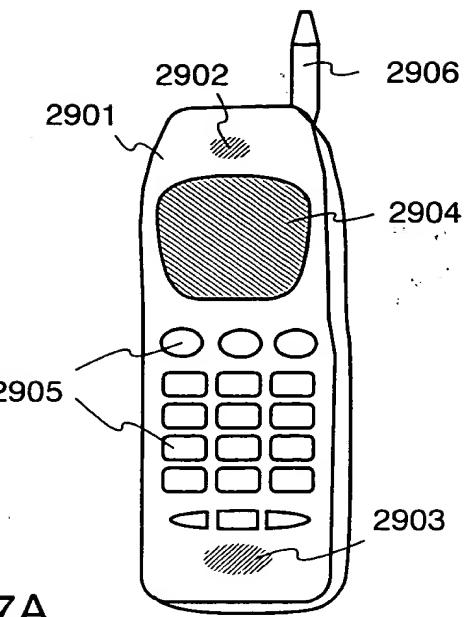


Fig. 17A

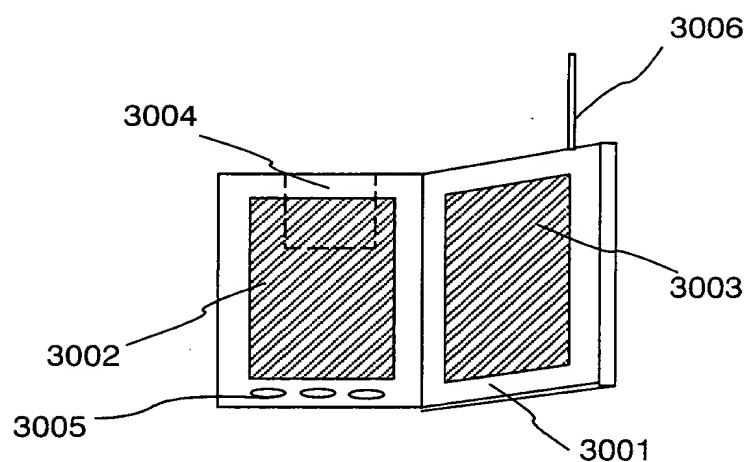


Fig. 17B

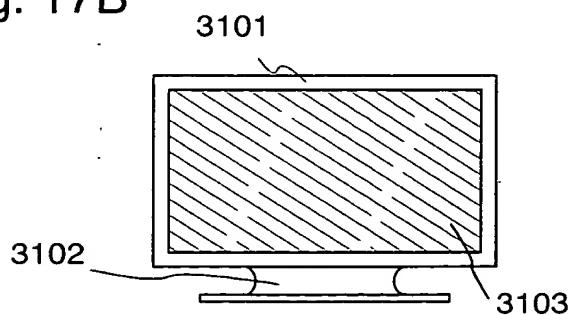


Fig. 17C

Fig.18A

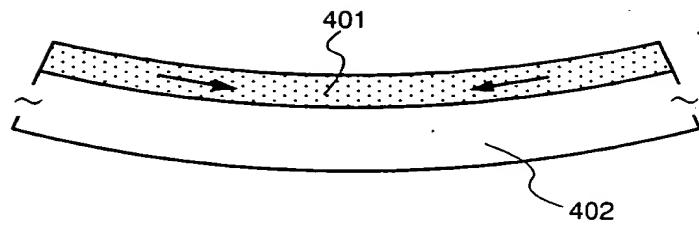
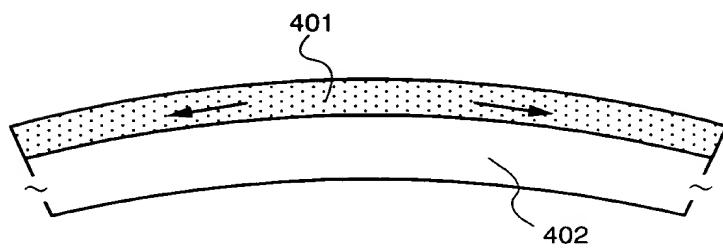


Fig.18B



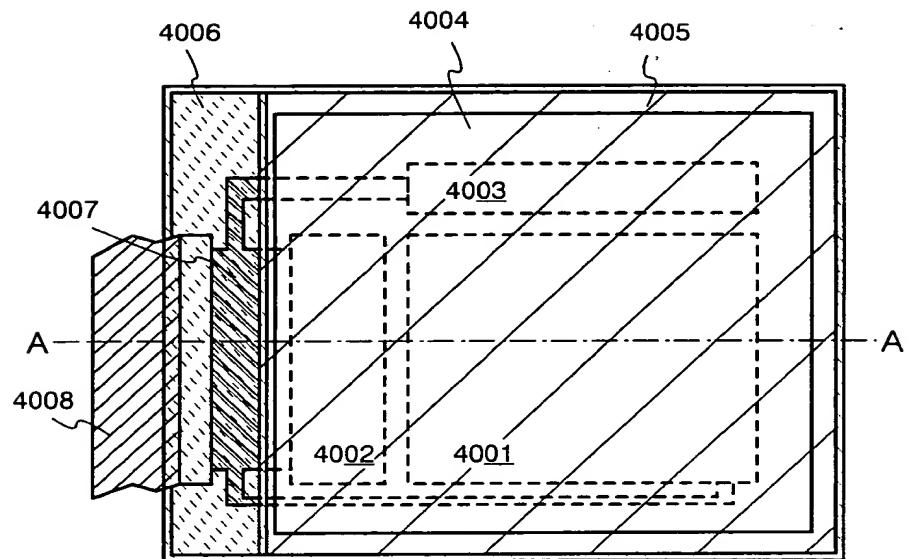


Fig.19A

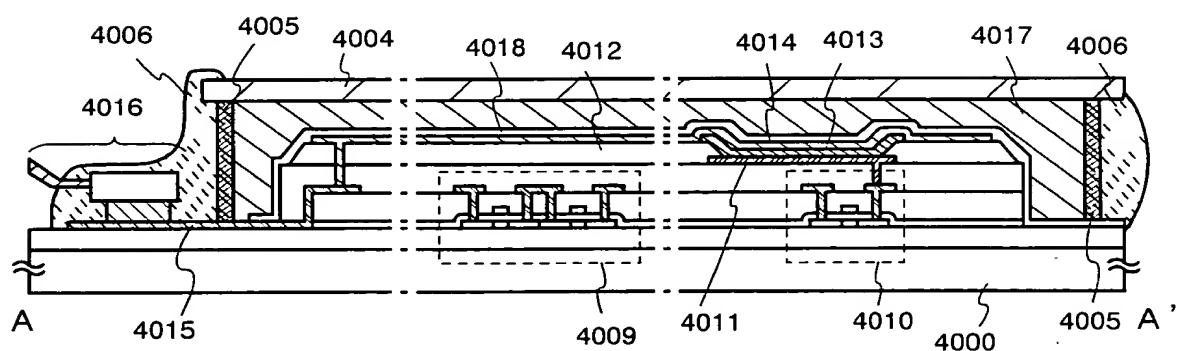


Fig.19B

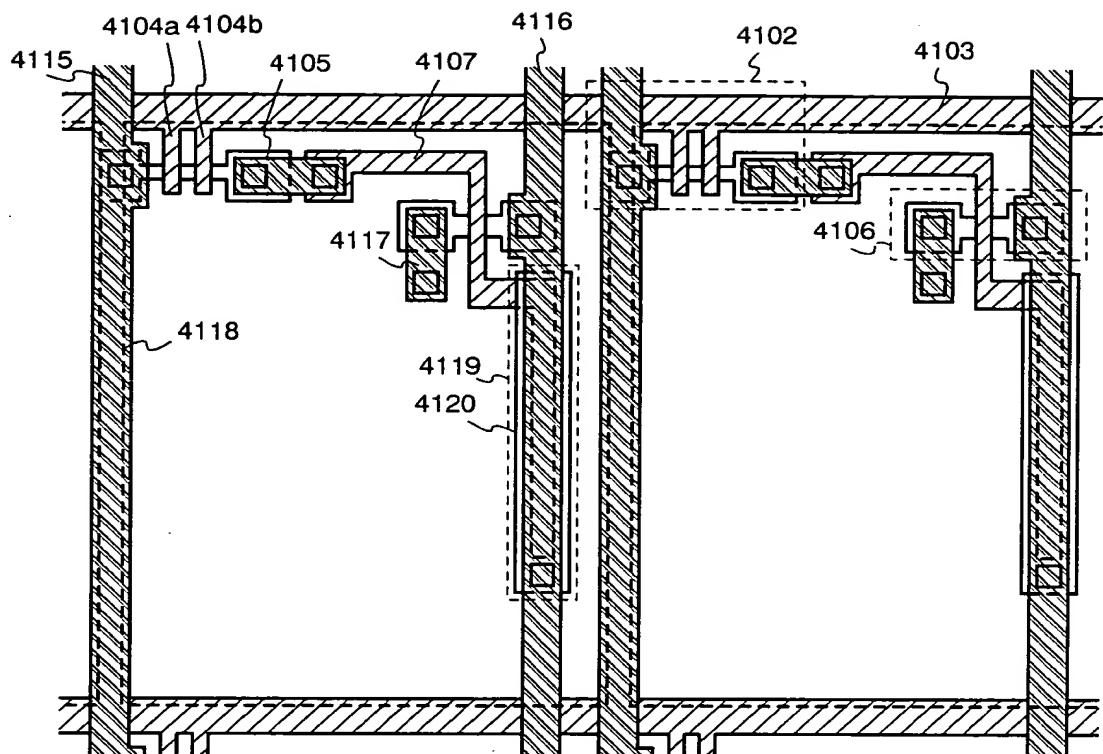


Fig.20A

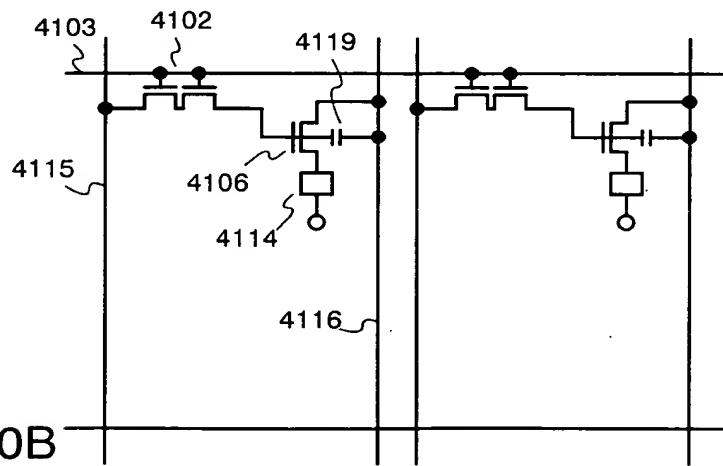


Fig.20B

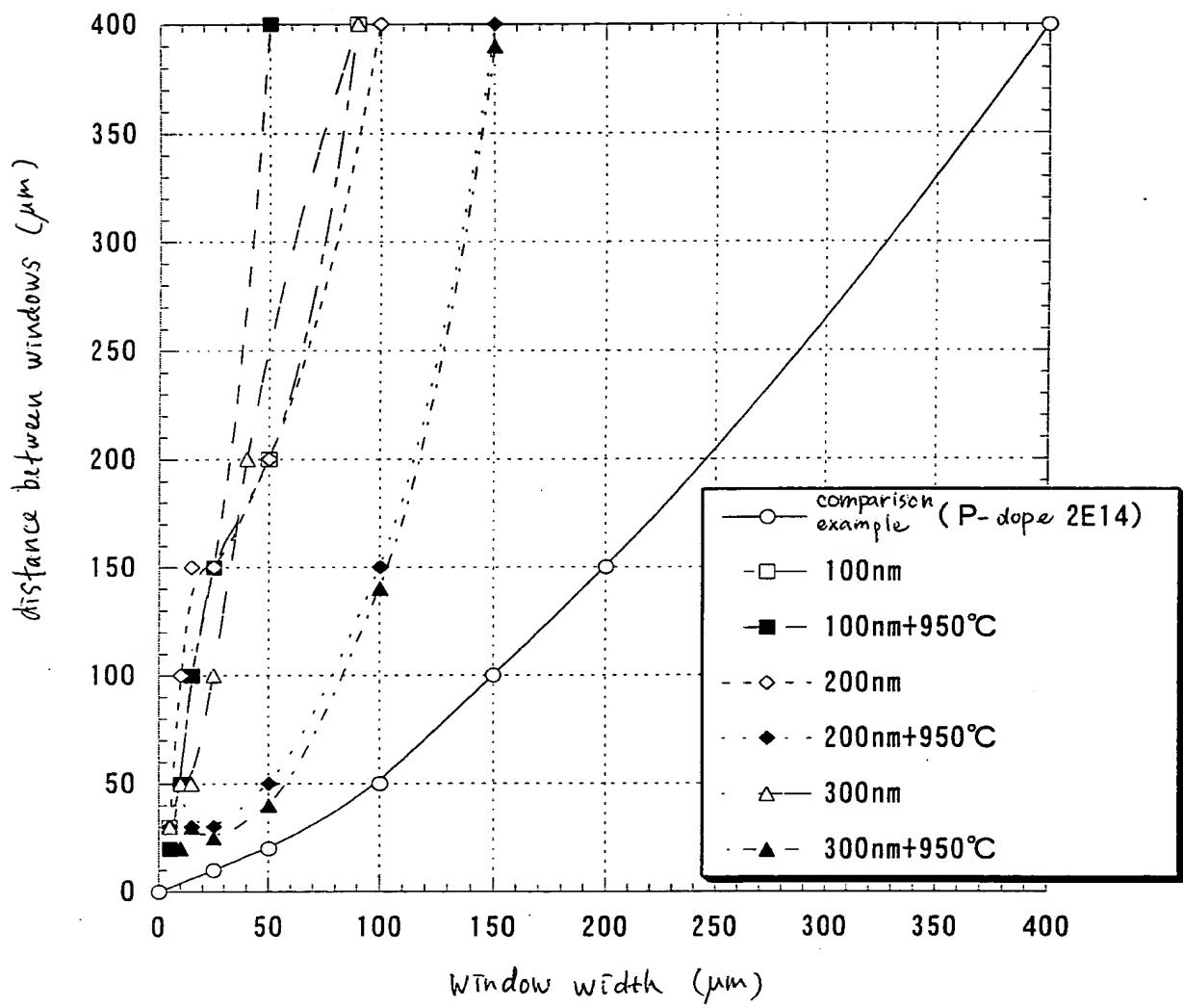


Fig. 2 |

Fig.22A

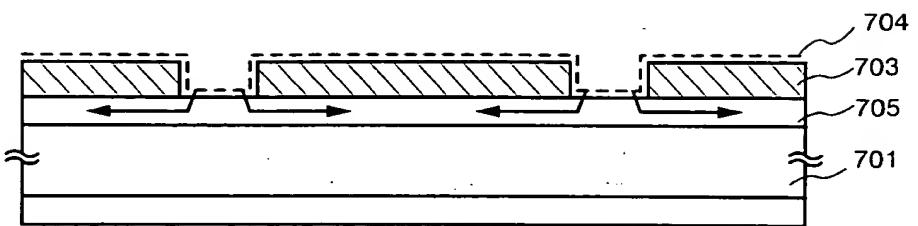


Fig.22B

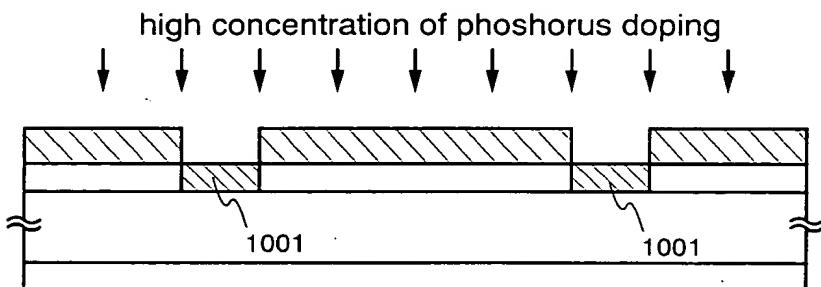


Fig.22C

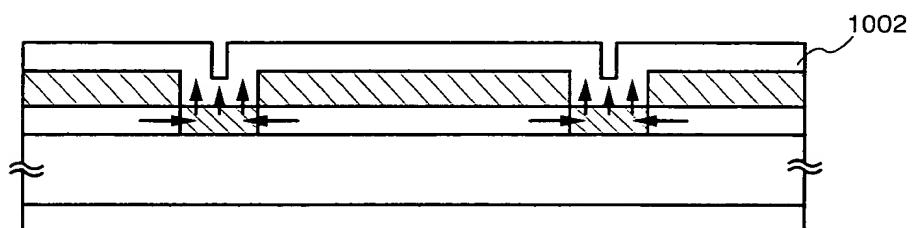


Fig.22D

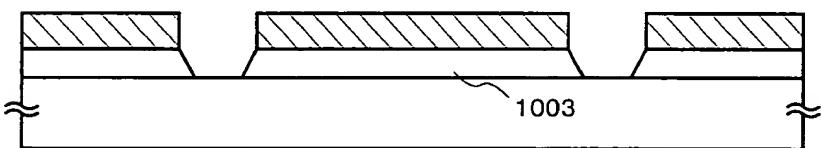
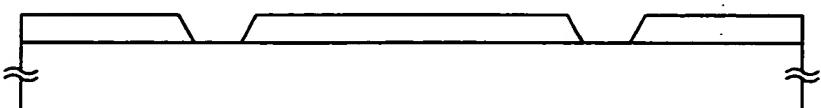


Fig.22E



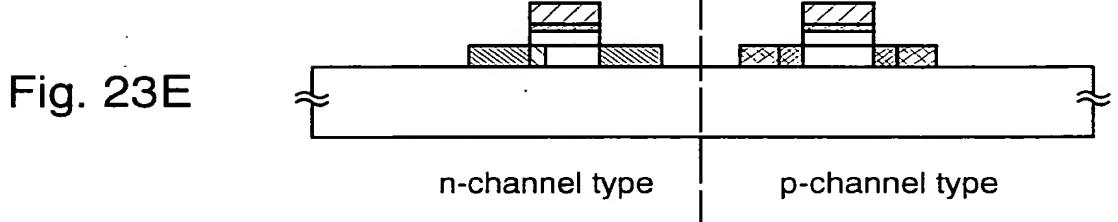
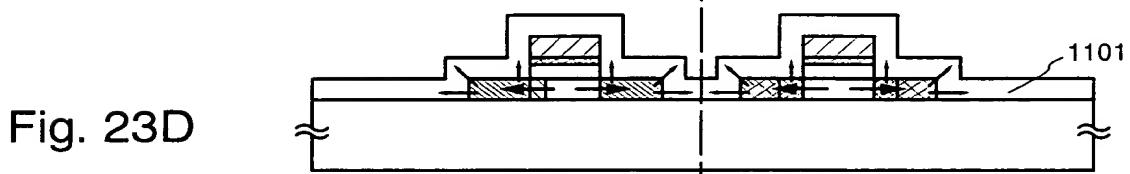
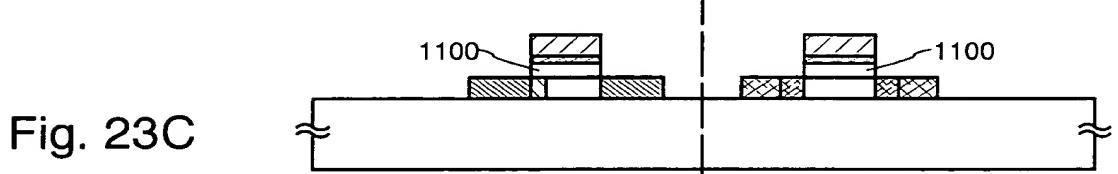
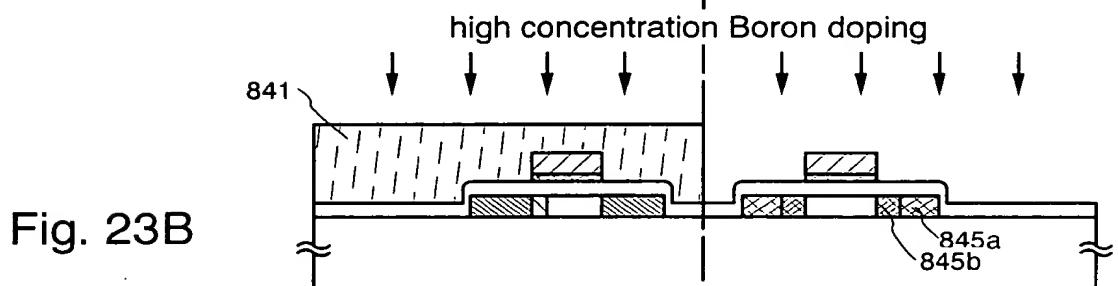
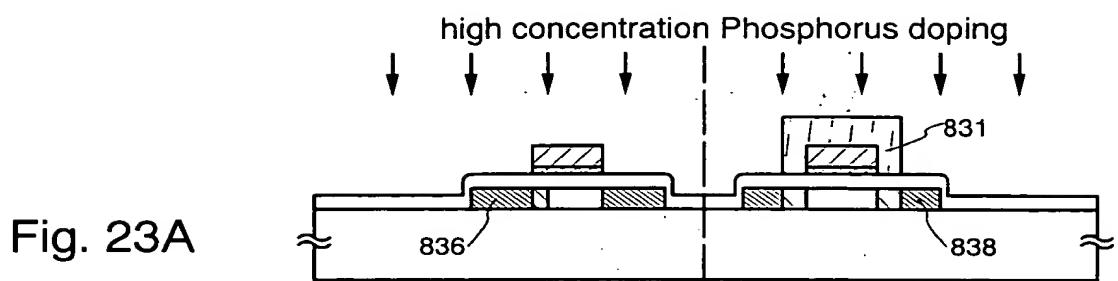


Fig. 24A

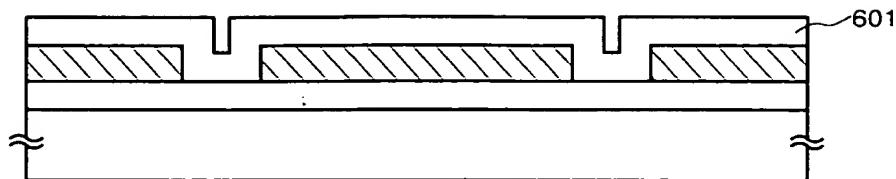


Fig. 24B

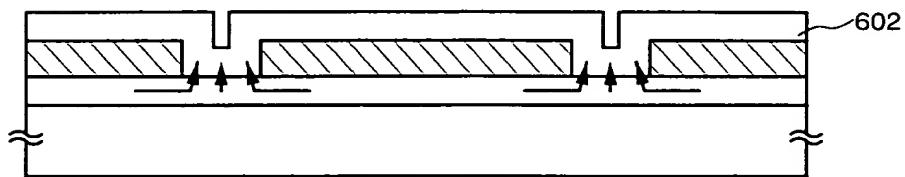


Fig. 24C

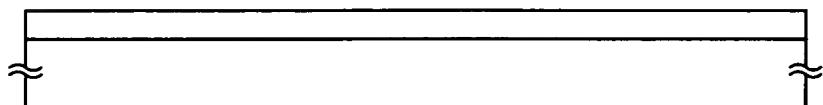


Fig. 24D

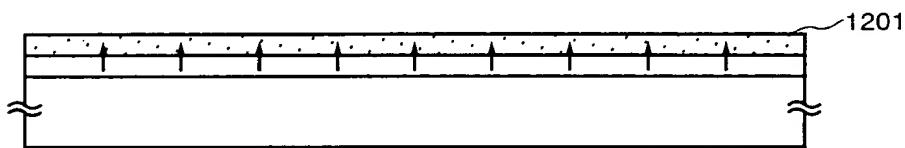


Fig. 24E

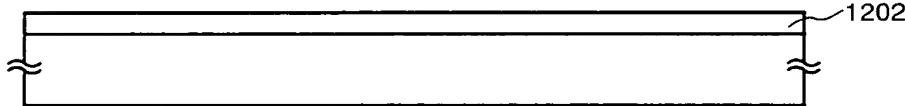


Fig. 25A

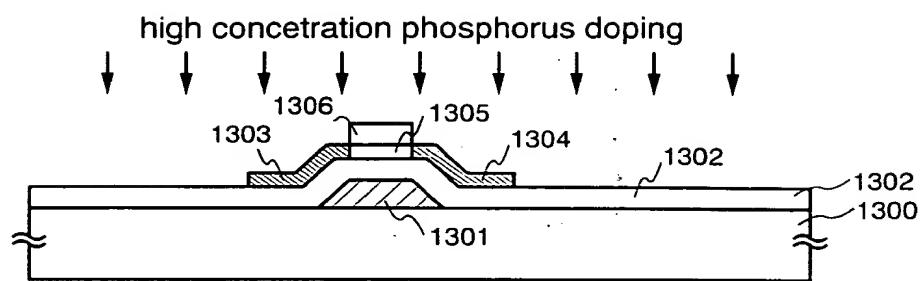


Fig. 25B

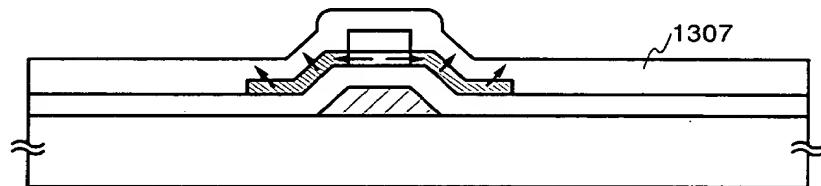


Fig. 25C

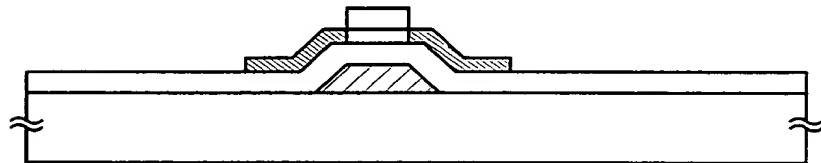
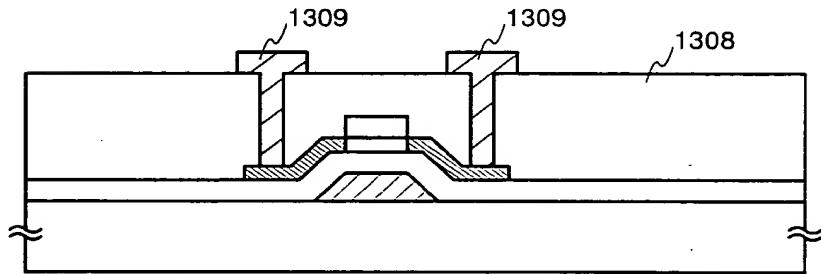


Fig. 25D



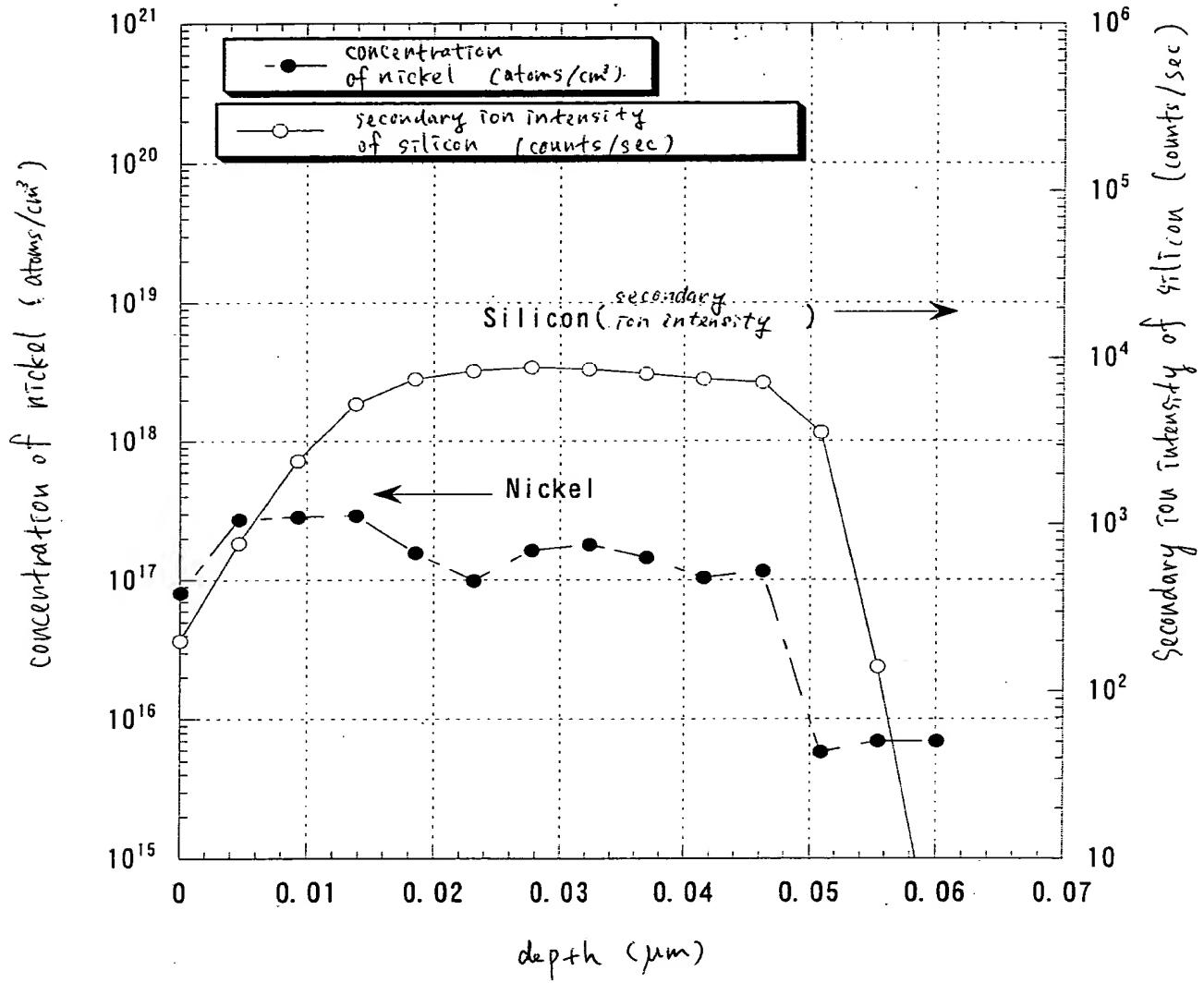


Fig. 26

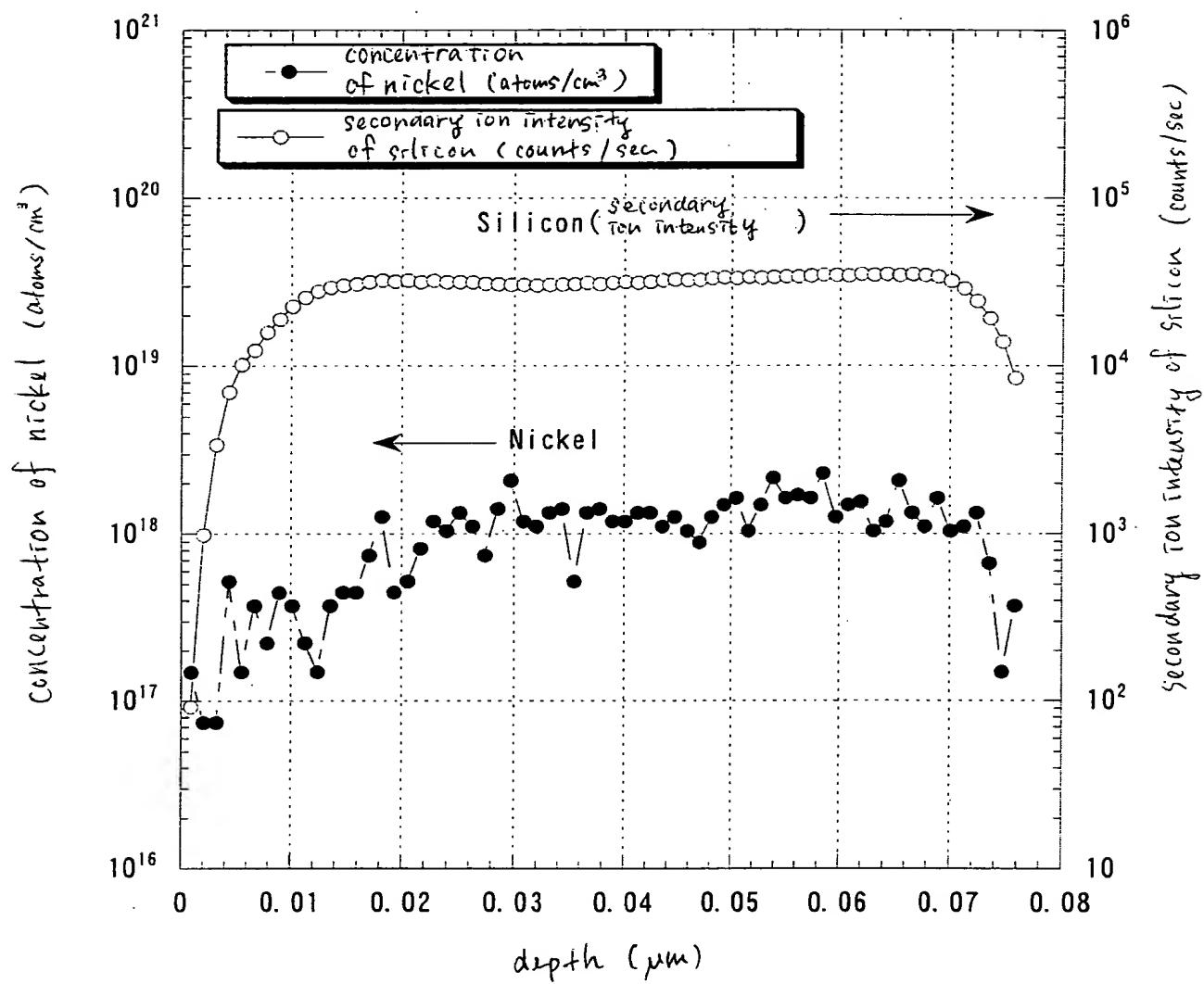


Fig. 27

Table 1

condition	film thickness (nm)	condition of thermal treatment	gettering effect
1	150	None	x
2	150	600°C, N ₂ , 12hr	○
3	150	950°C, N ₂ , 2hr	○
4	330	None	○
5	330	600°C, N ₂ , 12hr	○
6	330	950°C, N ₂ , 2hr	○
7	470	None	○
8	470	600°C, N ₂ , 12hr	○
9	470	950°C, N ₂ , 2hr	○
10	300	None	○
11	300	950°C, N ₂ , 2hr	○